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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/473,137	12/28/1999	MATSUTARO MIYAMOTO	991517	9634

38834 7590 12/03/2004

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EXAMINER

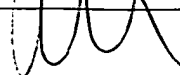
VERDIER, CHRISTOPHER M

ART UNIT PAPER NUMBER

3745

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/473,137	Applicant(s) MIYAMOTO ET AL. 	
	Examiner Christopher Verdier	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7-13-04, 8-31-04.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38,40-59,61-84 and 88-103 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38,40-55,57-59,61-84,88-100 and 103 is/are allowed.
- 6) ☒ Claim(s) 101 and 102 is/are rejected.
- 7) ☒ Claim(s) 56 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/104,171.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9-25-02</u> . | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 13, 2004 has been entered.

Applicants' Amendment dated July 13, 2004 has been carefully considered but is deemed non-persuasive. The specification has been amended to correct the informality set forth in the previous Office action. The Applicants' statement that they are not required to file the foreign priority documents in the instant application because they were filed in application 09/104,171 is correct. Claims 51, 71, and 83-84 have been amended to overcome the rejections under 35 USC 112, first and second paragraphs set forth in the previous Office action. Correction of the above matters is noted with appreciation. With regard to Applicant's request for a complete initialed copy of the IDS filed September 25, 2002, the file copy has been initialed so that the inadvertent omission of initials on the foreign reference is corrected and an updated copy is attached hereto.

Applicants' argument that claim 83 as amended is allowable has been considered and is persuasive. With regard to newly submitted claims 101 and 102, Applicants have argued that in Okamura 6,924,841, the electric heater 14 is not directly attached to the stator of the groove pumping section. (Applicants apparently intend to refer to Okamura 5,924,841, and not "6,924,841"). The examiner agrees with this argument, but this pertains to the figure 2

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embodiment of Okamura. The figure 1 embodiment of Okamura (as well as Japanese Patent 9-368,555) reads on newly submitted claims 101-102, as set forth later below. With regard to Japanese Patent 2,557,551, Applicants have argued that the electric heater is not directly attached to the stator of the groove pumping section and cannot achieve high efficiency of heat transfer, and that nichrome wire 18 thereof is not attached to a lower end surface of the stator of the groove pumping section. These arguments are not persuasive with regard to claim 102, because the nichrome wire 18 is clearly shown in figure 1 of Japanese Patent 2,557,551 as being directly attached to a lower end surface of the stator 16 of the groove pumping section. Note that claim 102 broadly recites "a heating source". Since nichrome wire 18 is described as a "heating section" (see page 8, line 1 of Applicants' English translation of Japanese Patent 2,557,551), it provides/radiates heat and is therefore a "heating source". Also note that claim 102 broadly recites that the heating source is directly attached to "a lower end surface of said stator". Claim 102 does not require that the heating source is directly attached to the lowermost end surface of the stator of the groove pumping section, but rather "a lower end surface of said stator". Since the nichrome wire 18 is located near the lower end of stator 16, it is directly attached to "a lower end surface of said stator". Applicants' arguments on page 20 of the "Remarks" dated July 13, 2004 have been considered, but are not persuasive for the reasons set forth above.

Applicant's argument that new claim 103 defines over the prior art of record is persuasive.

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Election/Restriction

The number of added claims has increased significantly throughout prosecution.

Submission of additional claims may require reconsideration of whether an additional restriction requirement is warranted.

Claim Objections

Claims 56 and 101 are objected to because of the following informalities: Appropriate correction is required.

In claim 56, line 2, -- a -- should be inserted after "and". Note that Applicant apparently did not provide an exact copy of previously presented claim 56 and omitted the above term from claim 56.

In claim 101, line 6, -- a -- should be inserted after "at".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 101-102 are rejected under 35 U.S.C. 102(e) as being anticipated by Okamura 5,924,841 (figure 1). Note that the effective filing date of the subject matter of claims 101-102 is July 14, 1999. Note the turbo-molecular pump comprising a casing portion 1 housing a stator 4/20 and a rotor 6 therein, a vane pumping section near 4 and a groove pumping section near 9 comprised by the stator and rotor, and a heating source 17 directly attached to a lower end portion of the stator 20 of the groove pumping section at a position lower than a lower end of the rotor 6 near 9 of the groove pumping section. The heating source 17 is also directly attached to a lower end surface of the stator 20 of the groove pumping section. Note that since element 17 is a good heat conductor and transmits/radiates heat, it is broadly considered to be a "heating source".

Claim 102 is also rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent 2,557,551 (figure 1). Note that the effective filing date of the subject matter of claim 102 is July 14, 1999. Note the turbo-molecular pump comprising a casing portion 1 housing a stator 6/16 and a rotor 4 therein, a vane pumping section near 5/6 and a groove pumping section near 15/16 comprised by the stator and rotor, and a heating source 18 directly attached to a lower end surface of the stator 16 of the groove pumping section. Since nichrome wire 18 is described as a "heating section" (see page 8, line 1 of Applicants' English translation of Japanese Patent 2,557,551), it provides/radiates heat and is therefore a "heating source". Also note that claim 102 broadly recites that the heating source is directly attached to "a lower end surface of said stator". Claim 102 does not require that the heating source is directly attached to the lowermost end

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surface of the stator of the groove pumping section, but rather "a lower end surface of said stator". Since the nichrome wire 18 is located near the lower end of stator 16, it is directly attached to "a lower end surface of said stator".

Claims 101-102 are also rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent 9-368,555 (figure 1). Note that the effective filing date of the subject matter of claims 101-102 is July 14, 1999. Note the turbo-molecular pump comprising a casing portion 1 housing a stator 4/20 and a rotor 6 therein, a vane pumping section near 4 and a groove pumping section near 9 comprised by the stator and rotor, and a heating source 17 directly attached to a lower end portion of the stator 20 of the groove pumping section at a position lower than a lower end of the rotor 6 near 9 of the groove pumping section. The heating source 17 is also directly attached to a lower end surface of the stator 20 of the groove pumping section. Note that since element 17 is a good heat conductor and transmits/radiates heat, it is broadly considered to be a "heating source".

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 102 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 7 of U.S. Patent No. 6,793,466. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 7 of the patent "anticipates" application claim 102. Accordingly, application claim 102 is not patentably distinct from patent claim 7. Here, patent claim 7 requires the pump casing having an intake port and an exhaust port, the heating unit being positioned near the exhaust port, with the heating unit being disposed in a space inside the pump casing that is evacuated to a vacuum and held in contact with the stator side component near the exhaust port, with an exhaust assembly comprising a turbine blade exhaust section, while application claim 102 does not require these elements. Thus it is apparent that the more specific patent claim 7 encompasses application claim 102. Following the rationale in *In re Goodman* cited in the preceding paragraph, where applicant has once been granted a patent containing a claim for the specific or narrower invention, applicant may not then obtain a second patent with a claim for the generic or broader invention without first submitting an appropriate terminal disclaimer. Note that since application claim 102 is anticipated by patent claim 7 and since anticipation is the epitome of obviousness, then application claim 102 is obvious over patent claim 7.

Allowable Subject Matter

Claims 38, 40-55, 57-59, 61-84, 88-100, and 103 are allowed.

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Claim 56 contains allowable subject matter; Applicants should correct the informality therein.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (571) 272-4824. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.V.
November 30, 2004



Christopher Verdier
Primary Examiner
Art Unit 3745